

REMARKS

An Office Action was mailed on November 20, 2007. Any fee due with this paper, including any necessary extension fees, may be charged on Deposit Account 50-1290.

Summary

Claims 1-13 are pending. New claims 14-20 are presented. No new matter has been added.

An Information Disclosure Statement disclosing the following references discussed in the specification will be submitted shortly:

EP B1 0775049;
U.S. Patent No. 4,654,546;
U.S. Patent No. 5,917,437;
U.S. Patent No. 6,078,006;
U.S. Patent No. 6,242,683;
U.S. Patent Publication 2004/003703; and
WO 96 06 718.

The IDS will also disclose the following references cited by the EPO and the Office Action from the EPO:

DE A 100 42 300;
U.S. Patent No. 5,559,301;
U.S. Patent No. 6,603,469; and
U.S. Patent Publication 2002/0108484.

Objections to the Drawings

The drawings are objected to for failing to include claimed matter.

The electret bubble film as claimed in claim 6 refers to transducer, e.g., electromechanical, film 95, which is depicted in Fig. 3a as filed. See pg. 5, line 37 et al. “. . . *an electromechanical layer 95 which preferably is Emfit® film . . .*” and pg. 8, lines 9-10 “*Due to the fact that when the transducer film is an electrically charged Emfit® electret bubble film . . .*” See also pg. 7, lines 19-20.

The electronic switching circuit as claimed in claim 7 is now shown in Fig. 3c with reference numeral 122. The specification is suitably amended. No new matter has been added.

The processor as claimed in claim 8 is now shown in Fig. 3c with reference numeral 121. The specification is suitably amended. No new matter has been added.

The display as claimed in claims 11 and 12 is now shown in new Fig. 4 with reference numeral 123. The specification is suitably amended. No new matter has been added.

The piezoelectric material as claimed in claim 13 is associated with film 95. Since this is a material property as opposed to structure, Applicant respectfully submits that it need not be shown as one skilled in the art would understand the limitation of a piezoelectric material. In the alternative, film 95 is depicted in the drawings and one skilled in the art understands the limitation of a piezoelectric material.

The drawings are also objected to for indicating subject matter that has not been described, specifically reference item 95. The Examiner is respectfully referred to pg. 5, line 37 and pg. 6, line 2 of the specification as filed.

Accordingly, the Examiner is respectfully requested to withdraw the objections.

Objections to the Claims

Dependent claims 4 and 5 stand objected to for failing to limit the claims further with respect to the independent claim from which the claims depend. Claims 4 and 5 are now amended in a non-limiting manner.

Applicant respectfully submits that the claims now positively recite further limitations. With respect to claim 4, the claimed limitation recites that the pressing force affects the operation of

the pressed area. With respect to claim 5, the claimed limitation recites charges batteries of the device. Each of these limitations further define and limit the invention from which they depend:

Accordingly, the Examiner is respectfully requested to withdraw the objections.

Rejection under 35 U.S.C. §112, First Paragraph

Claim 5 stands rejected under 35 U.S.C. §112, first paragraph as not being enabled, e.g., the application does not teach the claimed subject matter. The Examiner is respectfully directed to at least pg. 8, lines 16-19 of the specification wherein

“ . . . every pressing has en effect that a voltage is generated between the signal electrode and the ground plane. This voltage can be for example rectified with a rectifier and connected to an accumulator of the device, . . . ”

Therein, accumulator means a battery. See *“British. a storage battery or storage cell”* *“accumulator.” Dictionary.com Unabridged (v 1.1). Random House, Inc. 12 Mar. 2008.* *<Dictionary.com <http://dictionary.reference.com/browse/accumulator>>.or “a voltaic battery that stores electric charge” “accumulator” Dictionary.com. WordNet® 3.0. Princeton University. <http://dictionary.reference.com/browse/accumulator> (accessed: March 12, 2008).*

In view of the foregoing, Applicant respectfully submits that claim 5 is enabled. Accordingly, the Examiner is respectfully requested to withdraw the rejection.

Rejection under 35 U.S.C. §112, Second Paragraph

Claim 8 stands rejected under 35 U.S.C. §112, second paragraph as being indefinite. The claim has been amended to recite the invention more clearly. No new matter has been added.

Accordingly, the Examiner is respectfully requested to withdraw the rejection.

Rejection under 35 U.S.C. §102(b) and 35 U.S.C. §103(a)

Claims 1-3, 7, and 10 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,731,535 to Hudak. Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Hudak in view of U.S. Patent No. 5,793,032 to Bard. Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Hudak in view of U.S. Patent No. 5,917,437 to Ojala. Claims 4, 8, 9, and 11-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hudak in view of U.S. Patent Publication 2002/0005108 to Ludwig.

Thus, all claims stand rejected in view of Hudak and another reference. The rejection is respectfully traversed.

The presently claimed invention includes

the control unit comprises a thin and elastic layered structure comprising electrodes and an active transducer material between the electrodes;
wherein the active transducer material comprises a charged or a polarized cellular electret film or a piezoelectric material; and
whereby touching it generates there between the electrode surfaces a charge or voltage or capacitance change the place and/or amplitude of which is calculated with a microprocessor or alike, and based on this information said changeable parameter values are changed.

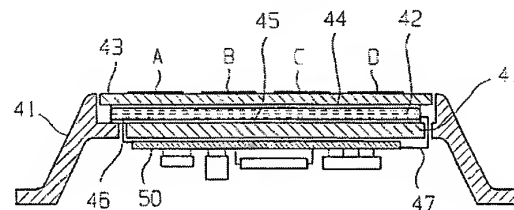
Neither Hudak, Ojala, nor any other cited reference, alone or in combination with each other, teach, disclose, or suggest the claimed invention.

Hudak teaches a control circuit used with a guitar. See Abstract. Hudak is admitted as failing to teach, disclose, or suggest an electret film. Item 12 of the Office Action. Similarly, Hudak fails to teach, disclose, or suggest a piezoelectric material in relation to a control unit. Instead, Hudak relies on proximity sensors 56 that include rectangular copper pads 68, which are disposed on the inside of the guitar body. When the user touches an exterior of the guitar body proximal to pad 68, the user's touch is picked up sensor 56.

Ojala is cited for filling the gap. Applicant respectfully submits that (1) Ojala fails to fill the gap or permit one skilled in the art to adapt Hudak to a different outcome, (2) absent impermissible hindsight, one skilled in the art would not seek to combine Ojala and Hudak, and (3) the combination of Ojala and Hudak is unworkable.

Ojala teaches a vandal resistant keyboard comprising one or more buttons. Col. 4, line 45.

These buttons include an EMF in a construction 42. Each of the buttons includes a raised frame 41. A keyboard structure is then fastened into the frame.



Ojala teaches that the keyboard structure, e.g., construction, 42 in itself includes a structure of Fig. 2 or a structure of Fig. 3. Both of these figures are depicted below.

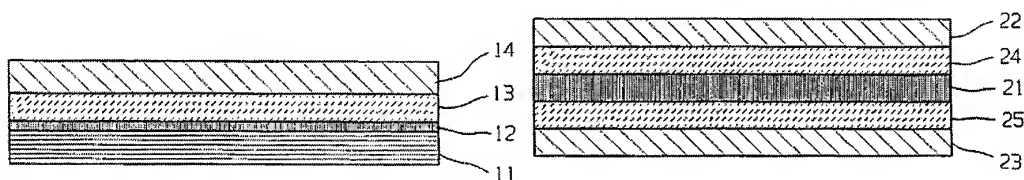


FIG. 2

FIG. 3

The structure of Fig. 2 includes an insulating layer 13 and a cover plate 14. The material of layer 13 depends on whether cover plate 14 is made if a "hard plastic," col. 3, line 34, or steel, col. 3, line 35.

The structure of Fig. 3 includes two stiff plates 22 and 23. Ojala teaches that

In addition to steel, suitable cover plate materials include other metals, such as aluminum, ceramic materials, glass and plastic. The thickness of the cover plate and other dimensions presented above are only examples, but they illustrate [sic] what is meant by the term "stiff cover plate" in the definition of the invention. It is essential in a keyboard according to this invention that it incorporates an EMF construction and a stiff

and, compared to conventional keyboard constructions and display dimensions, massive cover plate. (Emphasis added.)

In other words, Ojala teaches a construction that turns an EMF into a structure that is massive, much thicker than even regular button construction for the purpose of a vandal resistant structure.

In doing so, Ojala not only fails to fill the gap or permit one skilled in the art to adapt Hudak to a different outcome with respect to the present invention of an electromechanical control unit for a musical instrument, but clearly teaches away from “*a thin and elastic layered structure*” as claimed. The structure of Ojala is suitable for preventing vandals from breaking an ATM keyboard, but clearly would not be suitable when embodied in a musical instrument where careful finger control, deft playing, nuanced touch are the rule. Ojala clearly misses the point of the present invention to have a thin and elastic control structure

The incorporation in the guitar body of the key structure with a frame 41 would be more than awkward and destroy the usability of the instrument, but more importantly would miss the point of the invention. Omitting the frame, would similarly require the implementation of the structures taught in Figs. 2 and 3, which are stiff and inappropriate for a musical instrument. Nothing in Hudak or Ojala teaches how the structures taught in Figs. 2 and 3 are to be placed in the guitar body without a frame. Hudak offers no reason to change any aspect of Ojala - which was offered to modify Hudak, since Hudak relies on a proximity method of detecting a user-desirable change.

Absent impermissible hindsight, one skilled in the art would not seek to combine Ojala and Hudak. Each reference operates a control unit on a different principle, for different reasons, with different structures. Hudak supposes proximity sensors 56 that include rectangular copper pads 68, which are disposed on the inside of the guitar body. Ojala’s implementation of the structures taught in Figs. 2 and 3 are stiff and inappropriate for a musical instrument. Hudak fails to teach, disclose, or suggest a means of implementing Ojala and vice versa. Nothing, in either reference

suggests doing so in a musical instrument such that the instrument remains substantially usable for its purpose.


Moreover, as mentioned above the combination of Ojala and Hudak is unworkable because the mechanical and electrical structures are incompatible by themselves and when utilized in an instrument.

Accordingly, the Examiner is respectfully requested to withdraw the rejection.

All dependent claims are allowable for at least the same reasons as the independent claim from which they depend.

In view of the remarks set forth above, this application is in condition for examination and ready passage to allowance, which is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for examination or allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

 Respectfully submitted,
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